



COMPACT EX2

Sicherheits-Lichtvorhang und Mehrstrahl-Sicherheits-Lichtschränke
Ergänzung zur Anschluss- und Betriebsanleitung COMPACT

Safety light curtain and Multiple light beam safety devices
A supplement to the COMPACT Connecting and Operating Instructions

Rideau photoélectrique de sécurité et rampes de sécurité à multifaisceaux
Complément aux instructions de raccordement et de service COMPACT

Cortina óptica y barrera óptica de seguridad multihaz
Complemento para las instrucciones de conexión y uso del COMPACT




About this installation and operating instructions manual

The general COMPACT Connecting and Operating Instructions are part of the scope of delivery and must be observed during commissioning, assembly, etc. The changes or additions that are relevant to use in explosion-hazard zones are essentially listed here.



All assembly, installation and commissioning work may only be done by specialist personnel qualified to do the job. It is imperative to observe the requirements of the COMPACT Connection and Operating Instructions as well as this addendum and, in particular, the installation standards **EN 60079-14** for gases or **EN 50281-1-2** for dust.

Notes regarding safety and warnings are marked by this symbol .

Leuze lumiflex GmbH + Co. KG is not liable for damages caused by improper use. Knowledge of this manual is an element of proper use.

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Contents

1	General	12
	1.1 Use in accordance with the intended purpose	12
	1.2 Additional EX rating plate	12
2	Assembly	13
3	Maintenance	14
4	Tests	14
5	EC Declaration of Conformity	15

1 General




The provisions of the 1999/92 EC Directive additionally apply to operation of the COMPACT EX2 in explosive atmospheres. In the European member states, these have been formulated in corresponding national laws, for example the operating safety law ("BetrSichG") in the Federal Republic of Germany.

1.1 Use in accordance with the intended purpose

COMPACT EX2 was developed in conformity with the provisions of the EC Directive 94/9/EC (ATEX Directive). It corresponds to device group II, Category 3 and is intended for use in explosive atmospheres belonging to Zone 2 (gases) in accordance with EN50021 and Zone 22 (dust) in accordance with EN 50281-1-1. Not allowed is the use in case of "conductive dust". The technical data stated below, as indicated on the rating plate, applies.

1.2 Additional EX rating plate

The rating plate shown here contains the data for use in explosive atmospheres and is affixed in addition to the standard rating plate. The IP degree of protection IP54, which deviates from the standard rating plate, would still apply if the transmitter and/or receiver were to be damaged by an impact, according to the requirements of EN 50014.

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Type COMPACT Cx - xxxx EX2, year of construction 2003	
 CE II 3 G	 CE II 3 D
EEx nA II T4	T 135 °C
$0^{\circ}\text{C} \leq T_a \leq +55^{\circ}\text{C}$	
IP54	
 Nicht unter Spannung öffnen! Do not open under tension! Ne pas ouvrir sous tension!	

2 Assembly

Assemble only during a process break. That is to say, the transmitter and the receiver must have been assembled completely in conformity with the operating instructions before the process can restart. Note that the Safety-Interface is not permitted for operation in explosive atmospheres and so it must only ever be placed outside the explosive atmospheres.

The PG cable screw is intended for cables with an external diameter of 8 to 11 mm; other cables should not be used. The cables must be laid in such a way that they are not at risk of damage.

The PG cable screw of the transmitter and the receiver must be carefully tightened in such a way that the strain relief device can withstand the following test:

When subjected to stress with a value representing the diameter of the cable in mm multiplied by 10, at the very least 100 N, the cable must not be pulled out of the PG further than 6 mm at most in the course of 6 hours.



Do not open when the power is on.

Opening transmitter or receiver under a live tension may produce **sparks** and may lead to explosion of gases or dust in the explosive atmospheres! Therefore, the housings may only ever be opened after the power supply tension has been disconnected outside the Ex-zone and safeguarded against reconnection. Wait for at least 60 seconds after switching off.

When the devices are fitted, the "Do not open under tension" warning must be easily legible on the transmitter and receiver.

Warning:



Nicht unter Spannung öffnen!
Do not open under tension!
Ne pas ouvrir sous tension!

3 Maintenance

COMPACT EX2 safety light curtains do not require any maintenance. If necessary, the front plates may be cleaned, but only using a damp cloth. Otherwise the range of the device might be reduced, or excessively thick dust deposits arise.

Warning:



Frontscheibe nur mit feuchtem Tuch reinigen!

Clean screen with moist cloth only!

Ne nettoyez la vitre qu' avec un chiffon humide!

It is important to moisten cloths to prevent **electrostatic charging** of the front screens. This may cause explosive gases or dust to ignite!

When the device is assembled, the warning notice "Front plate should only be cleaned with a damp cloth" must be easily readable both on the transmitter and on the receiver.

4 Tests

You should regularly carry out a visual inspection of the connections and the cables, but without touching them.



If in the course of the inspection you discover damage to the equipment or to the cables, do not touch the damaged components! Instead, all persons present should immediately leave the hazardous area, and the mains voltage should be switched off (outside the hazardous area), steps being taken to ensure that it cannot be switched on again. A break in process is needed before dismantling the equipment and investigating the fault outside the hazardous area, so that there is no danger of an explosion taking place.

If necessary, contact our hotline.

5 EC Declaration of Conformity



Leuze lumiflex

EC Declaration of Conformity

according to ATEX Directive 94/9/EC, Annex X

We herewith declare

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that the following described electrical apparatus in our delivered version complies with the appropriate basic safety and health requirements of the ATEX Directive 94/9 EC based on its design and type, as brought in circulation by us. In case of alteration of the electrical apparatus, not agreed upon by us, this declaration will lose its validity.

Description of the electrical apparatus: Safety light curtains / Multiple light beam safety devices

Electrical apparatus type: **COMPACT EX2**

Serial number: see type plate

Type of protection: nA, not sparking

Apparatus group/classification for gases: EEx nA II T4, II 3 G, T4

Apparatus group/classification for dusts: II 3 D, 135°C

Applicable EC Directive: ATEX Directive 94/9 EC

Applicable European standards: EN 1127-1
EN 50014
EN 50021
EN 50281-1-1

CE-marking: The compliance with the Directives 94/9 EC, 73/23 EEC and 89/336 EEC is certified by the CE-mark.

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